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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/630,041

07/30/2003

Sung-Kwon Lee

29926/39498

9447

4743

7590

09/09/2004

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EXAMINER

RICHARDS, N DREW

ART UNIT

PAPER NUMBER

2815

DATE MAILED: 09/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/630,041

Applicant(s)

LEE, SUNG-KWON

Examiner

N. Drew Richards

Art Unit

2815

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>7/30/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: page 5 line 6 should recite "FIGS. 5 and **6**" instead of "5 and 8" as there is no figure 8. Page 5 line 21 should recite "effectively prevent."

Appropriate correction is required.

Claim Objections

2. Claim 1 is objected to because of the following informalities: line 7 should recite "a plurality of connection patterns"; line 11 should recite "patterns are allocated."

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 3, 5 and 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 3 recites a predetermined distance in line 4. It is indefinite as to whether this is the same predetermined distance of claim 1 line 4 or whether this is a different distance.

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Claim 5 recites the dummy patterns including bar-type patterns and then recites locations at a distance between two bar-type patterns. This is indefinite as one cannot ascertain the meets and bounds of the claim. It is unclear as to whether the bar-type patterns of the dummy patterns are located a predetermined distance from themselves, or from the bar-type patterns in the central area of the wafer, or from another bar-type pattern of another dummy pattern. Using the same language to describe the bar-type patterns (in the central area of claim 1) and the bar-type patterns of the dummy regions adds more confusion to this claim. It is suggested that other language be adopted to differentiate the various patterns in the dummy region from the bar-type patterns in the central area. Claim 5 also recites a predetermined distance in line 3. It is indefinite as to whether this is the same predetermined distance of claim 1 line 4 or whether this is a different distance.

Claim 6 is further indefinite as it is unclear as to which bar-type patterns are being compared to the size of which bar-type patterns.

5. Insofar as definite, and as best understood, the claims are rejected over prior art as follows.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Oh et al. (U.S. Patent No. 5,867,434).

Oh et al. disclose a semiconductor device in figure 2, for example, the device comprising:

a plurality of bar-type patterns (175,184,185) allocated at a predetermined distance in the central area of the wafer;

a plurality of dummy patterns (164,165) formed in the edge area; and

a plurality of connection patterns (151,152,153) adapted to couple at least two of the bar-type patterns (184,185) to each other and adapted to couple the dummy patterns (164,165) to each other;

wherein the connection patterns (151,152,153) of the plurality of dummy patterns are allocated in a zigzag fashion.

With regard to claim 2, Oh et al. disclose the bar-type pattern is a pattern for a device isolation layer or a landing plug contact. The bar-type pattern is referred to as a "bit line contact" but the structure shown is considered the same as for a "landing plug contact." Being a contact for a bit line or a landing plug is merely an intended use of the contact. Further, the structure is formed as a plug and referred to as a "contact."

With regard to claim 3, the dummy pattern includes:

a first bar-type pattern (164);

a second bar-type pattern (165) allocated at a predetermined distance from the first bar-type pattern (164); and

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the connection pattern (151) is adapted to connect the first bar-type pattern (164) to the second bar-type pattern (165).

With regard to claim 4, the first and second bar-type patterns (164,165) are in a range of about 80% to about 120% of the size of the bar-type pattern (175,184 or 185).

With regard to claim 5, the bar-type patterns of the dummy pattern and the central bar-type patterns are located at a predetermined distance from adjacent two bar-type patterns, the dummy pattern includes N number of bar-type patterns where N is a positive integer, and at least two bar-type patterns of the N number are connected.

With regard to claim 6, the first and second bar-type patterns (164,165) are in a range of about 80% to about 120% of the size of the bar-type pattern (175,184 or 185).

With regard to claim 7, the central area and the edge are are a cell center area and a cell edge area, respectively.

With regard to claim 8, the central area is a core cell area and the edge area is a peripheral area.

Conclusion


8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sakurai et al. (U.S. Patent No. 5,066,997), Nakamura et al. (U.S. Patent No. 5,616,931), Kuroki (U.S. Patent No. 6,128,209), Kim (U.S. Patent No. 6,461,941 B2), Kotani et al. (U.S. Patent No. 6,727,028 B2), Lee (U.S. Patent No. 6,784,051 B2).

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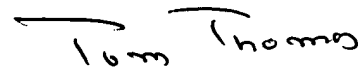
Any inquiry concerning this communication or earlier communications from the examiner should be directed to N. Drew Richards whose telephone number is (571) 272-1736. The examiner can normally be reached on Monday-Friday 9:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Thomas can be reached on (571) 272-1664. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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